



# TO-92 Plastic-Encapsulate Transistors

## KSP12 TRANSISTOR ( NPN )

### FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

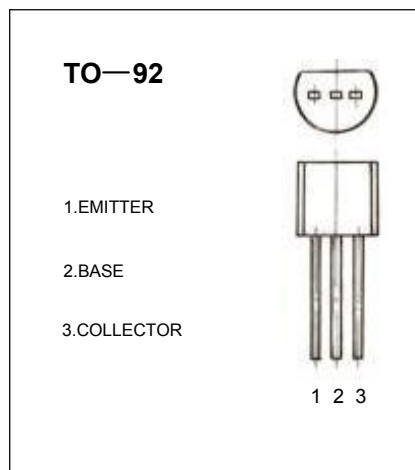
$$I_{CM}: 1.2 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 20 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$



### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}, I_B=0$	20			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=15\text{V}, I_E=0$			100	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=15\text{V}, I_B=0$			100	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EC}=10\text{V}, I_C=0$			100	$\mu\text{A}$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	20K			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.01\text{mA}$			1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$			1.4	V

### CLASSIFICATION OF

#### HFE

Rank	1	2
Range	20K-30K	30K-40K